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| 10/721,216 | 11/26/2003 | Ralph E. Burns | 2599-104-C4 | 6271 |
| 6449 7590 03/08/2007 ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005 | | | EXAMINER BEX, PATRICIA K | |
| | | | ART UNIT 1743 | PAPER NUMBER |

| SHORTENED STATUTORY PERIOD OF RESPONSE | NOTIFICATION DATE | DELIVERY MODE |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/08/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary

Application No.

10/721,216

Applicant(s)

BURNS, RALPH E.

Examiner

P. Kathryn Bex

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date
:4/2004;5/20004;12/2005;1/2006; 2/2006;11/2006.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "1250" has been used to designate both "the optical sensor aperture shutter assembly" and "light receiver mounting wall" in paragraph [0366].

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "1332" and "1342" have both been used to designate "MTU transport mechanism" in paragraph [0392].

2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicants' cooperation is requested in correcting any errors of which applicant may become aware in the specification.
4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "a receptacle vessel isolating device" in claims 1 and 8; "a structure" in claims 1 (line 3) and claim 4; "receptacle vessel isolating...including structure at least partially surrounding a receptacle vessel" in claim 1; and "a transport mechanism" in claim 2.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

While the specification does describe a "receptacle vessel positioner assembly 1300", see paragraph [0370] and Figs. 46, 48-49, the specification does not disclose "a receptacle vessel isolating device" as recited in claim 1. For examination purposes, the

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Examiner has interpreted the "the receptacle vessel isolating device" to mean the receptacle vessel positioner assembly 1300.

Claim 1 also recites a "receptacle vessel isolating device...including a *structure* at least partially surrounding a receptacle vessel engaged by the receptacle vessel isolating device." How is this *structure* different than the *receptacle positioner* including V-block structure defined by opposed, spaced-apart wall portions...said V-block engages the receptacle vessel recited in claim 8? Since claim 8, depends from claim 1, this appears to introduce *two separate elements* that surround and engage the receptacle vessel. This is confusing and indefinite since the Examiner can find no support for two separate element that engage the receptacle vessel.

Claim 4 recites the limitation "a transport path" in line 1. Is this the same or an additional transport path disclosed in claim 1? For examination purposes, this has interpreted as the same transport path.

Claim 8, line 3 and 4, recite an "aperture panel". There is no antecedent basis for this limitation in the claim. For examination purposes, the Examiner has interpreted this to refer to the previously recited "aperture wall".

In claim 14, "wherein the plurality of adjacently arranged receptacle vessels" should be changed to -- wherein said plurality...--.

Clarification of all the above is respectfully requested.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-3 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Schacher (US Patent no. 5,384,094).

Schacher teaches an instrument 3 for detecting the amount of light emitted from the contents of a receptacle vessel 2. The instrument comprises: a structure (i.e., rotor magazine 1) defining a horizontal transport path along which a plurality of adjacently-arranged receptacle vessels are moved through the instrument; a photosensitive device (photomultiplier tube 51) in measuring device 33 disposed along the transport path and constructed and arranged to detect light emitted from the contents of a receptacle vessel operatively positioned with respect to the photosensitive device. The instrument also includes a pivotal receptacle vessel-isolating device (i.e., gripper 7, swivel arm 9 having tongs 13 and a pivotal hood 41; see col. 7, 31-35). The pivotal receptacle vessel isolating device is positioned adjacent the transport path and constructed and arranged to pivot between: (1) a first position permitting the plurality of adjacently-arranged receptacle vessels to be moved along the transport path (Figs. 4, 6, 7); and (2) a

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second position operatively engaging one of the receptacle vessels disposed on the transport path and operatively positioned with respect to the photosensitive device (Figs. 5, 8, see col. 5, lines 1-15).

The receptacle vessel isolating device is constructed and arranged to substantially prevent light from sources other than the operatively positioned receptacle vessel engaged by the receptacle vessel isolating device from being detected by the photosensitive device via pivotal hood 41. The pivotal hood surrounding a receptacle vessel engaged by the receptacle vessel-isolating device when the receptacle vessel-isolating device is in the second position (see col. 6, line 55 to col. 8, line 14).

Regarding claim 2, the transport mechanism is constructed and arranged to operatively position each of the receptacle vessels relative to the photosensitive device for a time duration sufficient to permit the photosensitive device to detect the light form the emitted from the receptacle vessel.

With respect to claim 3, Schacher teaches a computer (not shown) which counts the movement of the gripper via stepper motor, thereby acting as a sensor and determining when the receptacle vessel isolating device is in the first and second positions (see col. 5, line 17- col. 6, line 35).

With respect to claim 8, the analyzer of Schacher has a receptacle vessel isolating device of Schacher further comprises a motor operatively coupled to the receptacle positioner for effecting powered rotation of the receptacle positioner between the first and second positions, respectively. The receptacle vessel-isolating device further comprises an aperture wall 49 disposed on one side of the transport path and

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having an aperture 56 formed therein. The photosensitive device 51 being positioned with respect to the aperture panel such that light enters the photosensitive device through the aperture formed in the aperture panel. The receptacle vessel isolating device comprises: a positioner frame 14, 15, 16 disposed adjacent the transport path on a side opposite the aperture panel. The receptacle positioner is rotatably mounted within the positioner frame for pivoting movement along an axis parallel to 15 between first and second positions. The receptacle positioner includes a V-block structure (note "v-shaped" tongs 13) defining opposed, spaced-apart wall portions. The V-block structure being constructed and arranged such that when the receptacle positioner is in the second position, the V-block structure engages a receptacle vessel disposed in front of the aperture formed in the aperture panel and the opposed wall (col. 7, lines 35-41; Fig. 5).

Regarding claim 9, the receptacle vessel isolating device further comprising a motor operatively coupled to the receptacle positioner for effecting powered rotation of the receptacle positioner between the first and second positions (see disclosure at col. 5, line 35- col. 6, line 35.)

With respect to claim 10, the instrument of Schacher further comprises an aperture wall 49 disposed on one side of the transport path and having an aperture 56 formed therein. Moreover, the photosensitive device Schacher comprises: a photomultiplier tube 51 adapted to detect light emitted from an object placed before a light-admitting opening at one end of the photomultiplier tube (no reference no.) and to generate an electronic signal indicative of light detected by the photomultiplier tube.

Schacher teach a shutter assembly mounted on the aperture panel and constructed and arranged to selectively admit light through the aperture formed in the aperture panel and into the photomultiplier tube by movement of the shutter assembly between an open position. This allows light to pass through the aperture and a closed position preventing light from passing through the aperture. The shutter assembly comprising: a shutter 57 constructed and arranged for movement between open and closed positions, whereby the shutter blocks the aperture when the shutter is in the closed position and does not block the aperture when the shutter is in the open position.

9. Claims 1-2, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US Patent no. 4,826,660).

Smith et al., teach an analyte detection station for an automated immunoassay analyzer. The analyzer comprising: a structure 72 defining a horizontal transport path along which a plurality of adjacently-arranged receptacle vessels move through the instrument. The analyzer of Smith et al., includes a photosensitive device (photomultiplier tube 51) within measuring device 20 disposed along the transport path and constructed and arranged to detect light emitted from the contents of a receptacle vessel 78 operatively positioned with respect to the photosensitive device. Further Smith et al., teach a receptacle vessel isolating device 58 for shielding radiant energy emanating from a source outside of the housing and pivots (between up and down movement via motor.) Thus, only radiant energy from the one of the plurality of vessels is detected by the detector (col. 8, line 40- col. 10, line 23.)

With respect to claim 10, Smith et al., teach a shutter assembly mounted on the aperture panel and constructed and arranged to selectively admit light through the aperture formed in the aperture panel and into the photomultiplier tube by movement of the shutter assembly (filter wheel 62) between an open position allowing light to pass through the aperture and a closed position preventing light from passing through the aperture. The shutter assembly comprising: a shutter constructed and arranged for rotational movement between open and closed positions. The shutter blocks the aperture when the shutter is in the closed position and does not block the aperture when the shutter is in the open position.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schacher (US Patent no. 5,384,094) in view Scherzer et al. (US patent no. 3,663,816)

As discussed above, the instrument of Schacher further comprises an aperture wall 49 disposed on one side of the transport path. The wall has an aperture 56 formed therein. Moreover, the photosensitive device of Schacher comprises: a photomultiplier tube 51 adapted to detect light emitted from an object placed before a light-admitting opening at one end of the photomultiplier tube (no reference no.), and to generate an electronic signal indicative of light detected by the photomultiplier tube. Moreover, Schacher teaches a shutter assembly mounted on the aperture panel and constructed and arranged to selectively admit light through the aperture formed in the aperture panel and into the photomultiplier tube by movement of the shutter assembly between an open position allowing light to pass through the aperture and a closed position preventing light from passing through the aperture. The shutter assembly comprising: a shutter 57 constructed and arranged for movement between open and closed positions corresponding to open and closed positions, respectively, of the shutter assembly. The shutter blocks the aperture when the shutter is in the closed position and does not block the aperture when the shutter is in the open position

Schacher does not explicitly teach a motor operatively coupled to the shutter for effecting powered "rotation" of the shutter between the open and closed positions, or one or more sensors that detect when the shutter assembly is open and/or closed.

Scherzer et al. teach an analyzer having transporting means for transporting a sample vial from an external loading platform into a light-tight counting chamber. The

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invention comprises a wall defining a counting chamber having an elongated passage, the wall having a shoulder, a sample platform, having a shaft coupled thereto to position the platform through the passage and into the counting chamber, and a shutter 60. The shutter is operatively coupled to a motor 80. Switches 68 and 69 act as sensors, which detect and control when the shutter assembly is open and closed (col. 2, line 67- col. 4 line 54.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have included in Schacher, the shutter assembly of Scherzer et al., in order to protect the highly sensitive photomultiplier from any outside light that may cause measurement error (col. 1, lines 19-26).

13. Claim 4, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schacher (US Patent no. 5,384,094) in view Babson et al. (US patent no. 5,885,529).

The teachings of Schacher have been summarized previously, supra. Schacher does not teach the analyzer having: an inlet and outlet with a transport path extending between the inlet and outlet (claim 4), the use of a bar code scanner positioned outside the housing (claim 12), or a reagent dispensing system for dispensing reagent into the receptacle vessels on the transport path (claim 13). However, an analyzer having an inlet and outlet, a bar code scanner and reagent dispenser are considered conventional in the analyzer art, see for example, Babson et al.

Babson et al., teach an automated analyzer housing having an inlet 201 and a waste station with various transport paths located there between and with detector system disposed adjacent the transport path 215. Furthermore, Babson et al., teach a carousel 207 containing sample tubes 208 into which reagent may be dispensed via pipettor 205 or 206 (Fig. 2a). The analyzer system of Babson et al., also includes a bar code scanner 210 for providing a reliable means for keeping track of the sample tube (col. 10, lines 16-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include in Schacher, the reagent dispenser and bar code reader of Babson et al., in order to provide a reliable means to keep track of the sample tubes as they move through the analyzer system.

14. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schacher (US Patent no. 5,384,094) in view of Babson et al. (US patent no. 5,885,529), as applied to claim 4 above, and further in view of Wihlborg (US Patent no. 5,445,794).

The teachings of Schacher and Babson et al., have been summarized previously, *supra*. Schacher and Babson et al., do not disclose an inlet door assembly constructed and arranged to move between an open position permitting a receptacle vessel to pass through the inlet and into the housing and a closed position restricting ambient light from entering the housing through the inlet. The inlet door assembly comprising a rotating door mounted so as to be rotatable about a generally horizontal axis of rotation. The rotating door having a solid portion and an open portion. The rotating door being rotated

into a position in which the open portion thereof is aligned with the inlet when the inlet door assembly is in the open position, and the rotating door being rotated into a position in which the solid portion thereof is aligned with the inlet when the inlet door assembly is in the closed position, as recited in claim 5.

Wihlborg does recite an door assembly constructed and arranged to move between an open position permitting a receptacle vessel to pass through and into the housing chamber 5 (Fig. 1) and a closed position restricting ambient light from entering the housing through the inlet. The inlet door assembly comprising a rotating door mounted so as to be rotatable about a generally horizontal axis of rotation (extending perpendicular to the plane of the paper). The rotating door having a solid portion 18 and an open portion 15, the rotating door being rotated into a position in which the open portion thereof is aligned with the inlet when the inlet door assembly is in the open position. The rotating door being rotated into a position in which the solid portion thereof is aligned with the inlet when the inlet door assembly is in the closed position. When the holes 11' 12' (11, 12) are again place into alignment, the tube is expelled into a collection site 29, which may include further analysis or transport path.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included in Schacher and Babson et al., the door assembly of Wihlborg, in order to insure the measuring station is reliably lightproof during the measurements (col. 1, lines 21-25).

With respect to claims 6 and 7, Wihlborg teach a computer having sensors 20, 21 which both determine the presence of the tube within the chamber, thereby causing a stepper motor (not shown; col. 2, lines 49-54) to rotate the movable component 2.

Again, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included in Schacher and Babson et al., a motor in communication with a sensor, as taught by Wihlborg, in order to reduce the manual work required by the technician. The court has held that providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art, see *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958).

While Wihlborg does not explicitly teach the use of a separate rotating door assembly for both inlet and outlet to the measuring system, it has been held that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced, see *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Thus, it would have been obvious to include a separate inlet and outlet door assembly, in the illuminometer system taught by Schacher, Babson et al. , and Wihlborg, in order to increase throughput by preventing bottlenecks commonly encountered in analyzers that use a single inlet/outlet.

15. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schacher (US Patent no. 5,384,094) in view of Wihlborg (US Patent no. 5,445,794).

The teachings of Schacher have been described above. Schacher does not disclose the plurality of adjacently-arranged receptacle vessels connected together.

However, Wihlborg does teach a measuring station arranged adjacent a working table 28 on which holders 27 containing tubes 25 engage one another. This allows the holders to interlock like a chain so as to be readily guided relative to the measuring station in a controlled and stepwise manner.

Thus, it would have been *prima facie* obvious to one having ordinary skill in the art at the time the invention was made to have included in Schacher, the interlocking receptacles of Wihlborg, in order to allow the holders to be readily guided relative to the measuring station in a controlled and stepwise manner.

Conclusion

16. No claim is allowed.


17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Bex whose telephone number is 571-272-2374. The examiner can normally be reached on Monday thru Thursday, 9 AM to 6 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PKB
Examiner
Art Unit 1743


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